

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE <b>J</b>		PAGE OF PAGES <b>1 3</b>	
2. AMENDMENT/MODIFICATION NO. <b>0004</b>		3. EFFECTIVE DATE <b>27 February 2004</b>		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY  U.S. ARMY ENGINEER DISTRICT, ALBUQUERQUE CORPS OF ENGINEERS 4101 JEFFERSON PLAZA, N.E. ALBUQUERQUE, NEW MEXICO 87109-3435		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. <b>W912PP-04-R-0004</b> <input checked="" type="checkbox"/> 9B. DATED (SEE ITEM 11) <b>January 2004</b> 10A. MODIFICATION OF CONTRACTS/ORDER NO.  10B. DATED (SEE ITEM 13)			
CODE		FACILITY CODE					

### 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

### 13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

- ☒ A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
- B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
- C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
- D. OTHER (Specify type of modification and authority)

**E. IMPORTANT:** Contractor ☐ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

**PROJECT: DESIGN/BUILD, UPGRADE NATIONAL RADAR CROSS-SECTION (RCS) TEST FACILITY, WHITE SANDS MISSILE RANGE, OTERO COUNTY, NEW MEXICO**

1. This is Amendment No. 4 to Solicitation No. W912PP-04-R-0004; 20 January 2004. The following revisions shall be incorporated into the specifications and drawings. All other provisions shall remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

2. SOLICITATION, OFFER, AND AWARD, Standard Form 1442: In Block 13A, change the date for receipt of proposals from "05 Mar 2004" to "12 Mar 2004".
3. Amendment No. 3: On the Amendment of Solicitation form, in Block 3, change the effective date from "20 January 2004" to "20 February 2004".
4. SECTION 00100, INSTRUCTIONS TO BIDDERS: On pages 8 through 11 of 178, delete clause "52.215-1 INSTRUCTIONS TO OFFERORS—COMPETITIVE ACQUISITION (MAY 2001)" in its entirety and replace with clause "52.215-1 INSTRUCTIONS TO OFFERORS—COMPETITIVE ACQUISITION (JAN 2004)", attached hereto.
5. SPECIFICATIONS: Delete the following listed pages and substitute the pages attached hereto. On the revised pages, for convenience, changes are emphasized by the amendment number in parentheses before and after changes from the previous issue. All portions of the revised (or new) pages shall apply whether or not changes have been indicated.

Delete Page

Insert Page

Volume 1 of 3

00800, Index  
00800-14 thru 00800-16  
01010-6 thru 01010-7  
01010-10  
01010-13  
01010-21  
01010-24 thru 01010-25  
01010-59  
01010-65  
01010-69  
01010-73  
01010-84  
01010-87  
01010-93 thru 01010-95  
01010-97 thru 01010-98  
01012-2  
01020-1  
01510-1

00800, Index  
00800-14 thru 00800-17  
01010-6 thru 01010-7  
01010-10  
01010-13  
01010-21  
01010-24 thru 01010-25  
01010-59  
01010-65  
01010-69  
01010-73  
01010-84  
01010-87  
01010-93 thru 01010-95  
01010-97 thru 01010-98  
01012-2  
01020-1  
01510-1

5. SPECIFICATIONS: (Cont'd)

Volume 3 of 3

Appendix O, Index

Appendix O, Index

6. DRAWING CHANGES: The following drawing is new and shall be added to Appendix O:  
Admin. Building.

////////LAST ITEM////////

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004)

(a) Definitions. As used in this provision--

"Discussions" are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer's discretion, result in the offeror being allowed to revise its proposal.

"In writing or written" means any worded or numbered expression which can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

"Proposal modification" is a change made to a proposal before the solicitation's closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

"Proposal revision" is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

"Time", if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals. (1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, or revision, of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(c) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to

evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award. (1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(iv) A summary of the rationale for award.

(v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of provision)

I N D E X

SPECIAL CONTRACT REQUIREMENTS

<u>Clause No.</u>	<u>Title</u>	<u>Page No.</u>
1.	COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK	1
2.	TIME EXTENSIONS	3
3.	LIQUIDATED DAMAGES - CONSTRUCTION	3
4.	CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS	3
5.	TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER	4
6.	LIMITATIONS ON SUBCONTRACTING	5
7.	PHYSICAL DATA	6
8.	AVAILABILITY AND USE OF UTILITY SERVICES	6
9.	LAYOUT OF WORK	6
10.	QUANTITY SURVEYS	7
11.	INSURANCE - WORK ON A GOVERNMENT INSTALLATION	7
12.	EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE	8
13.	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA	9
14.	DESIGNER OF RECORD	10
15.	KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS	11
16.	RESPONSIBILITY OF THE CONTRACTOR FOR DESIGN	11
17.	CONTRACTOR'S ROLE DURING DESIGN PROCESS	11
18.	GOVERNMENT RIGHTS (UNLIMITED)	12
19.	DRAWINGS AND OTHER DATA TO BECOME PROPERTY OF THE GOVERNMENT	12
(4) 20.	RIGHTS IN SHOP DRAWINGS	13
21.	DESIGN-BUILD CONTRACT ORDER OF PRECEDENCE	12
22.	PROPOSED BETTERMENTS	12
23.	REQUIREMENTS FOR REGISTRATION OF DESIGNERS	13
24.	SECURITY CONTRACT LANGUAGE FOR ALL CORPS OF ENGINEERS' UNCLASSIFIED CONTRACTS	13
25.	MANDATORY WORK STOPPAGES	13
26.	BRAND NAME OR EQUAL	13
27.	RECOVERED MATERIALS	14

(4)



process the investigation in coordination with the Contractor and contract employees.

In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services.) The Contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that the foreign national was legally admitted into the United States and has authority to work and/or go to school in the United States. Such documentation may include a United States Passport, Certificate of United States Citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), or Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

Classified contracts require the issuance of a DD Form 254 (Department of Defense Contract Security Classification Specification).

(4) 25. MANDATORY WORK STOPPAGES

(a) A mandatory work stoppage occurs whenever the Contractor is restricted from working a full workday and is unable to reallocate work forces to other locations. All costs associated with five mandatory work stoppages must be included in the bid price. No additional compensation or extension to the Contract performance period will be given as a result of five mandatory work stoppages.

(1) In the event that the Contractor's work force is required to evacuate any part of the working area during working hours established by the Contractor for this contract, the Government will then make an adjustment under the clause entitled, FAR 52.212-12 SUSPENSION OF WORK, see Section 00700. The Government's liability will be considered to be limited to reimbursement for loss of time of Contractor's employees and equipment which otherwise would have been employed on the job. The completion time for any part of the work will not be extended if the total number of working hours of work stoppage does not exceed 0.8 times the number of calendar days in the period between the date of notice to proceed and the specified completion date. In the event the Contractor is required to evacuate the area in excess of the time specified above, the completion times will be adjusted.

(b) The Contractor may be required, without advance notice, to move work to a different location. The Contractor shall be prepared to increase or decrease work forces with appropriate trades to perform work in the relocated work areas at no additional cost to the Government.

(c) The Contractor shall notify the Contracting Officer when a mandatory work stoppage occurs for recording purposes. Otherwise, the work stoppage will not be credited to the Contractor.

26. BRAND NAME OR EQUAL (FAR 52.211-6) (Aug 1999)

(a) If an item in this solicitation is identified as "brand name or equal," the purchase description reflects the characteristics and level of quality that will satisfy the Government's needs. The salient physical, functional, or performance characteristics that "equal" products must meet are specified in the solicitation.

(b) To be considered for award, offers of "equal" products, including "equal" products of the brand name manufacturer, must-

(1) Meet the salient physical, functional, or performance characteristic specified in this solicitation;

(2) Clearly identify the item by-

(i) Brand name, if any; and

(ii) Make or model number;

(3) Include descriptive literature such as illustrations, drawings, or a clear reference to previously furnished descriptive data or information available to the Contracting Officer; and

(4) Clearly describe any modification the offeror plans to make in a product to make it conform to the solicitation requirements. Mark any descriptive material to clearly show the modification.

(c) The Contracting Officer will evaluate "equal" products on the basis of information furnished by the offeror or identified in the offer and reasonably available to the Contracting Officer. The Contracting Officer is not responsible for locating or obtaining any information not identified in the offer.

(d) Unless the offeror clearly indicates in its offer that the product being offered is an "equal" product, the offeror shall provide the brand name product referenced in the solicitation.

27. RECOVERED MATERIALS. The Corps of Engineers encourages all bidders to utilize recovered materials to the maximum extent practicable. The attached APPENDIX R contains procurement guidelines for products containing recovered materials. The contractor must use materials meeting the Recovered Material Advisory Notices (RMANS) if and when they can be obtained in a reasonable amount of time and at the same price as materials that do not meet the specification. A current detailed list of CPG items with their RMANS may be viewed at [www.epa.gov/epaoswer/non-hw/procure/products.htm](http://www.epa.gov/epaoswer/non-hw/procure/products.htm).

(4)

- END OF SPECIAL CONTRACT REQUIREMENTS -

## APPENDIX R

### PART 247 - COMPREHENSIVE PROCUREMENT GUIDELINE FOR PRODUCTS CONTAINING RECOVERED MATERIALS

40 CFR Ch. 1 (9-1-99 Edition)

#### Subpart B-Item Designations

##### § 247.10 Paper and paper products.

Paper and paper products, excluding building and construction paper grades.

##### § 247.11 Vehicular products.

- (a) Lubricating oils containing re-refined oil, including engine lubricating oils, hydraulic fluids, and gear oils, excluding marine and aviation oils.
- (b) Tire, excluding airplane tire.
- (c) Reclaimed engine coolants, excluding coolants used in non-vehicular applications.

##### 247.12 Construction products.

- (a) Building insulation product including the following items:
  - (1) Loose-fill insulation, including but not limited to cellulose fiber, mineral fibers (fiberglass and rock vermiculite, and perlite);
  - (2) Blanket and batt insulation, including but not limited to mineral fibers (fiberglass and rock wool);
  - (3) Board (sheathing, roof decking, wall panel) insulation, including but not limited to structural fiberboard and laminated paperboard products, perlite composite board, polyurethane, polyisocyanurate, polystyrene, phenolics, and composites; and
  - (4) Spray-in-place insulation, including but not limited to foam-in-place polyurethane and polyisocyanurate and spray-on cellulose.
- (b) Structural fiberboard and laminated paperboard products for applications other than building insulation, including building board, sheathing shingle backer, sound deadening board, roof insulating board, insulating wallboard, acoustical and non-acoustical ceiling tile, acoustical and non-acoustical lay-in panels, floor underlayments, and roof overlay (cover board).
- (c) Cement and concrete, including concrete products such as pipe and block, containing coal fly as ground granulated blast furnace (GGBF) slag.
- (d) Carpet made of polyester fiber us in low- and medium-wear applications.
- (e) Floor tiles and patio block containing recovered rubber or plastic.
- (f) Shower and restroom dividers/partitions containing recovered plastic or steel.
- (g)
  - (1) Consolidated latex paint used for covering grafitti; and
  - (2) Reprocessed latex paint used for interior and exterior architectural applications such as wallboard, ceilings, and trim; gutter boards; and concrete, stucco, masonry, wood and metal surfaces.

§ 247.13 Transportation products.

- (a) Traffic barricades and traffic cones used in controlling or restricting vehicular traffic.
- (b) Parking stops made from concrete or containing recovered plastic or rubber.
- (c) Channelizers containing recovered plastic or rubber.
- (d) Delineators containing recovered plastic, rubber, or steel.
- (e) Flexible delineators containing recovered plastic.

§ 247.14 Park and recreation products.

- (a) Playground surfaces and running tracks containing recovered rubber or plastic.
- (b) Plastic fencing containing recovered plastic for use in controlling snow or sand drifting and as a warning/safety barrier in construction or other applications.

§ 247.15 Landscaping products.

- (a) Hydraulic mulch products containing recovered paper or recovered wood used for hydroseeding and as an over-spray for straw mulch in landscaping, erosion control, and soil reclamation.
- (b) Compost made from yard trimmings, leaves, and/or grass clippings for use in landscaping, seeding of grass or other plants on roadsides and embankments, as a nutritious mulch under trees and shrubs, and in erosion control and soil reclamation.
- (c) Garden and soaker hoses containing recovered plastic or rubber.
- (d) Lawn and garden edging containing recovered plastic or rubber.

§ 247.16 Non-paper office product.

- (a) Office recycling containers and office waste receptacles.
- (b) Plastic desktop accessories.
- (c) Toner cartridges.
- (d) Binders.
- (e) Plastic trash bags.
- (f) Printer ribbons.
- (g) Plastic envelopes.

§ 247.17 Miscellaneous products.

Pallets containing recovered wood, plastic, or paperboard.

3.6.2 **Administration Building.** The Administration Building shall be a single story, 3600 sq ft. building, with associated utilities. Additional improvements include sidewalks and parking area. Refer to the Architectural portion of Section 01010 for additional requirements.

3.6.3 **Target Preparation Buildings.** Two Target Preparation Buildings shall each be 10,000 sq ft., single story, with associated utilities. Additional improvements include sidewalks and parking area. Refer to the Architectural portion of Section 01010 for additional requirements.

3.6.4 **Parking Areas.** Improvements consist of a gravel parking lot with lighting and sidewalks. The parking area at the Administration Building shall be designed to accommodate a minimum of 25 POV spaces. One of the POV spaces shall be handicap accessible. The Administration Building is defined as an inhabited building per the MASB and the parking lot shall be located a minimum of 10m (33 ft) from the building. The parking area for the Target Preparation Buildings shall be designed to accommodate a minimum of 5 POV spaces. The Target Preparation Buildings are classified as uninhabited buildings and are not subject to the setback requirements identified in the MASB. Parking areas shall be designed to drain runoff to outer perimeter whenever possible. Ramps shall be provided at handicap parking spaces. New sidewalks shall be located as required to accommodate pedestrian traffic (able bodied and handicapped) from the parking area to the new buildings, and to tie to existing walks adjacent to project site.

3.6.5 **Miscellaneous Roads.** Extend existing gravel roads to the Administration Building's parking area as required. Provide vehicular access driveways to the new parking areas for the Target Preparation Buildings as required. Gravel and base course shall be provided in accordance with the Geotechnical Section of the RFP. The roads shall be designed for two-way traffic with radii and widths in accordance with Chapter II of the AEIM. Roads shall be designed to accommodate all applicable emergency and moving vehicles (fire trucks, etc.). Dimensions for fire lanes and turnarounds shall be in compliance with UFC 3-600-01. Road offsets from the new and existing buildings shall meet all applicable requirements stated in the MASB.

3.6.6 **Building Siting.** Buildings shall be located as described in the paragraph titled "Project Site", which is located in this section of the RFP. Facilities shall be sited to ensure an interesting, attractive, and functional site, taking into consideration the existing features of the site and adjacent facilities. Consideration shall be given to views, solar orientation, and topography of the site. Building setbacks shall be in accordance with Uniform Facilities Criteria (UFC 4-010-01), DoD Minimum Antiterrorism Standards for Buildings. Space between buildings shall provide open areas in accordance with good land-use planning and shall provide an appropriate environment commensurate with the function of the facility. The new buildings shall have a minimum separation of 15.24m (50 ft) from existing/proposed buildings. Minimum fire clearance separations between buildings shall be maintained in accordance with UFC 3-600-01. The finished first floor elevation of all buildings shall be a minimum of 12 inches above the highest point of the adjacent outside finished grade. The facility siting shall meet all applicable requirements stated in the MASB.



3.6.7 **Dumpster Pad.** Dumpster pads shall be provided. The dumpster pads shall be located to be conveniently accessible by both the staff and by waste removal vehicles. Dumpster pads must also be located in areas away from main entrances to the building. The pads shall be sized to accommodate double bins. Pads shall not be placed within 25m (82 ft) of new or existing buildings. If this separation distance cannot be met, pads shall be placed a minimum of 10m (33 ft) from buildings and the design of adjacent building components shall meet applicable requirements stated in the MASB. A minimum 4.6m (15 ft) long, concrete pavement approach slab shall be placed at the access to the dumpster pad. The approach slab shall be the full width of the pad and shall be designed to accommodate applicable vehicular loads.

(4) 3.6.8 **Sidewalks.** Concrete for sidewalks shall be standard concrete in accordance with Chapter II of the AEIM. Sidewalks shall be provided to allow for pedestrian circulation to/from the various elements of this project. Walks shall be provided as needed to provide connections to other functional areas (i.e. existing facilities, parking areas, dumpsters, etc.). Walks must be convenient, safe, and attractive with adequate lighting. Provide curb cuts and ramps as required for handicap accessibility. Ramps shall not be steeper than 1:12. The minimum walk width shall be 1.83m (6 feet). Walkways to building entrances (including stairwells) shall be a minimum of 2.44m (8 feet) wide. As a minimum, walks shall be provided to access all main and secondary building entrances. Walks provided for access to the building shall be centered at the doorway they serve. Walks shall be constructed in accordance with Plates C16 and C17 in Chapter II of the AEIM. (4)

3.6.9 **Handicapped Access.** All buildings shall be wheel chair accessible. Ramps for the handicapped shall be provided for wheel chair access from the parking area to adjacent sidewalks. Ramps shall also be provided in existing/new sidewalks where these sidewalks are crossed by new roads or by new parking area entrances. All ramps shall be designed and installed in accordance with the Uniform Federal Accessibility Standards and with Plate C15 in Chapter II of the AEIM.

3.6.10 **Standard Details and Design Data.** Site features shall be designed and constructed in accordance with the standard details and design data provided in Chapter II of the AEIM. The entire chapter is provided and some data may not be applicable to this project. In cases of conflict between the requirements stated in Section 01010 of the RFP and the standard details and design data in the AEIM, data in Section 01010 of the RFP shall govern.

3.6.11 **Borrow Area.** Borrow shall be obtained from a suitable off-base site. Coordination and approval of this site must be obtained through the Contracting Officer.

3.6.12 **Waste Area.** Demolition and construction waste from the project shall be disposed of at an off-base location approved by the Contracting Officer.

(4) 3.6.13 **Haul Route.** The Contractor shall utilize the Tularosa Gate for access. (4)

3.13.9 **Storm and Roof Drain Line Materials.** Materials for storm and roof drain lines shall comply with applicable industry standard specifications. Pipe joints shall be watertight. Ferrous metal piping materials will not be allowed.

3.14 **Utilities.** Utility services are available and are adjacent to the project sites. Utility connections shall be provided for the buildings as required below. Valves shall not be buried, they shall have valve boxes which extend to finished grade. New water service lines shall be connected to the main lines by hot tap. Interruption of utility services to adjacent facilities including water, electrical, and sanitary sewer shall be minimized during construction and shall be coordinated with the base through the Contracting Officer. Minimum notification time for required outages shall be 21 calendar days. All existing road crossings by utility lines shall be bored and sleeved with Schedule 80 PVC or 6 mm (1/4 in) wall steel pipe. Steel sleeve pipe shall receive cathodic protection and a protective coating of coal tar epoxy. Utilities shall not cross roads by open cut without approval of the Department of Public Works through the Contracting Officer. Utility entrances to the building (i.e., meters, fire department connections, etc.) shall not be located near the main entrance to the building. Utility equipment/units, meters, etc., shall be concealed on all four sides with screen walls and landscaping. Refer to the Electrical portion of Section 01010 for information on new communication and electrical items.

3.14.1 **Existing Utilities.** It shall be the responsibility of the Contractor to verify the existence, location, size, depth and condition of the existing utilities. The Contractor shall notify the Contracting Officer if discrepancies or adverse conditions in the existing utilities are found. The Contractor shall take all precautions necessary to ensure that existing utility lines to remain are not damaged during the construction process. Existing utility lines damaged during construction shall be replaced in-kind, at no expense to the Government. The Contractor shall raise/lower existing utility manholes as required to accommodate new construction grades. Existing utility manholes and covers not previously subjected to vehicular traffic shall be replaced/modified as required to accommodate applicable traffic loads associated with the new development of this project. Refer to the Electrical portion of Section 01010 for information on existing communication and electrical items.

3.14.2 **Cathodic Protection.** Cathodic protection shall be provided for all buried ferrous metallic utility components such as valves, fittings, bends, etc. Design of cathodic protection systems shall be in accordance with applicable industry standard specifications.

3.14.3 **Water.** Existing well and water storage tanks provide available water to the site servicing the new Administration Building and the new Target Preparation Buildings. New distribution lines tapped into the existing service line shall be of adequate size to satisfy applicable domestic

(4)

and fire flow requirements. Additional storage capacity for fire protection measures is provided by two 100,000-gallon storage ponds located on site. Refer to the Mechanical portion of Section 01010 for additional information and requirements.

(4)

3.14.5.1 **LPG Storage Tanks.** A new LPG storage tank system shall be required for the Target Preparation Buildings. The existing LPG storage system serving the existing target preparation building shall be removed and a new system serving the existing target preparation building and the two new target preparation buildings shall be installed. The existing storage system consists of a 5000-gallon tank, tank filling station, meters and regulators. The new storage system shall have two, 12,000-gallon tanks with a filling station, meters and regulators.

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The tank storage area shall be fenced and shall be easily accessible to the LPG supply vehicles. The storage tanks shall comply with all applicable codes, including NFPA 58 and ASME Standards.

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3.14.5.2 **Shut-Off Valves, Meters, Regulators and Building Service Entrances.** Refer to the Mechanical portion of Section 01010 for information and requirements.

3.15 **Revegetation.** All earthen areas not developed, but disturbed during construction, shall be reseeded with a native grass mix.

3.16 **Storm Water Pollution Plan (SWPPP).** The selected Proposer/Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) that complies with the National Pollution Discharge Elimination System (NPDES).

3.17 **Permits.** The Contractor is responsible for obtaining all necessary Federal, state, county, and local permits required to complete the construction of this project. The Contractor is responsible for paying all fees associated with obtaining the permits.



## 5. ARCHITECTURAL DESIGN

### 5.1 Scope.

(4) 5.1.1 **Conceptual Design.** Develop conceptual exterior elevations, floor plans and typical wall sections for two Target Preparation buildings, one Administration building and a Guard House (option) based on the following narrative description and the attached function adjacency block diagram. (4)

(4) 5.1.2 **Building Design.** The building's exterior envelope and structural system shall be a pre-engineered metal building. Buildings should be single story, rectangular, clear span with standard repetitive structural bays. Roofs are center ridge 3 in 12 sloped metal roofs with building overhangs and gable ends. The guard house (Option) may be constructed of reinforced load bearing split face masonry with a sloped metal roof with gable ends, steel studs with EIFS or masonry veneer. (4)

5.1.3 **Interior partitions** may be constructed with either standard concrete masonry units or gypsum wallboard and metal studs. After award, minor revisions to the interior floor plans may be required by the Air Force to better meet functional and programmatic requirements.

5.2 **Applicable Standards.** The latest edition is to be used.

5.2.1 Design Compatibility Standards for White Sands, NM.

5.2.2 U.S. Army Corps of Engineers Southwestern Division Architectural and Engineering Instructions Manual (CESWD-AEIM).

5.2.3 International Building Code (IBC), 2000.

5.2.4 Department of Defense Unified Facilities Criteria (UFC) Design: General Building Requirements, UFC 1-200-01.

5.2.5 Department of Defense Unified Facilities Criteria (UFC) Design: Fire Protection Engineering for Facilities, UFC 3-600-01.

5.2.6 Department of Defense Unified Facilities Criteria (UFC) Design: DoD Minimum Antiterrorism Standards for Buildings, UFC 4-010-01.

5.2.7 Department of Defense Unified Facilities Criteria (UFC) Design: Energy Conservation, UFC 3-400-01.

5.2.8 Department of Defense Unified Facilities Criteria (UFC) Design: Air Force Sign Standard, UFC 3-120-01.

5.2.9 Uniform Federal Accessibility Standards (UFAS).

5.2.10 ANSI/CABO A117.1 ADA Accessibility Guidelines for Buildings and Facilities.

(5) Ceiling finish: Painted suspended gypsum wallboard ceiling system in office area. Exposed structure in Target Preparation Bay and support spaces, except chemical storage room and foyer.

(6) Windows are not permitted in the Target Preparation Building.

(7) All doors shall be on a card and code system. The interior shall be protected with motion sensors, and the exterior doors shall be monitored via video at the new guard house building.

(4) **5.6 Guard House (Option).**

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**5.6.1 Internal Activities.** Space provides shelter and office space for security guards to remotely monitor other facilities and control access to the site.

**5.6.2 Space Adjacencies.** The guard house requires a clear view of both the incoming road, and the road to the facilities. After award, minor revisions to the floor plan may be required to provide optimum functional adjacencies and provision of dedicated utility and communication rooms.

(4) **5.6.3 Space Allocations.** Provide a 400 gross square foot building.

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(1) 1 Office. 8'-8" x 10' minimum.

(2) 1 Handicap accessible restroom with water closet, wall hung lavatory and a urinal. 6'x10' minimum.

(3) 1 guard room. 15'x9'8" minimum.

**5.7 Barrier Free Design.** The ground floor entry doors, restrooms, and the site area contained within the limits of this project shall be fully accessible to all handicapped individuals in accordance with the requirements of the Americans with Disabilities Act (ADA) and the Uniform Federal Accessibility Standards (UFAS).

**5.8 Life Safety.** This facility shall be designed to meet or exceed the minimum construction and life safety standards as specified by Fire Protection Engineering for Facilities, UFC 3-600-01. The minimum allowable construction type for all buildings shall be Type II, non-combustible construction. Requirements for the fire resistance of door, wall, ceiling and floor assemblies shall be in accordance with the International Building Code (IBC).

**5.9 Fire Protection.** The administration building is fully sprinklered. The Target Preparation buildings are not fire sprinklered. Fire Department access shall be provided on at least three sides of each building. Furnish and install portable fire extinguishers in recessed extinguisher cabinets located as specified in NFPA 10 Fire Extinguishers.

**5.10 Antiterrorism Protection.** The administration building shall be designed to incorporate minimum construction standards in accordance with DoD Minimum Antiterrorism Standards for Buildings, UFC 4-010-01. The other buildings are exempt from minimum antiterrorism construction measures as provided by UFC 4-010-01.

**5.11 Energy Conscious Design.** Energy conservation design shall be in accordance with Energy Conservation, UFC 3-400-01. Thermal insulation shall be provided in accordance with the mechanical design requirements. Passive solar design shall be limited to building orientation, thermal mass, roof color, building color, door and window orientation, window glazing, shading and minor combination wind and photo voltaic applications. Provide permanent, metal window shade canopies over all south and west facing windows. Inset all exterior personnel doors a minimum of 3'-0" and provide vestibules at all exterior personnel doors in the administration building, other buildings are optional. Joints between metal wall framing and window and door frames to air conditioned spaces shall be completely sealed with low expansion foam to reduce infiltration.

(4) **5.12 Acoustical Design.** Exterior walls, doors, windows and walls between private offices and walls between offices and conference rooms shall have a Sound Transmission Class (STC) of at least 45. Interior door openings are not required to be sound rated. Walls enclosing toilet rooms and mechanical rooms shall be designed and constructed with a minimum STC of 45 to 49. Utility outlets and ductwork penetrations shall not compromise the acoustical integrity of the wall, floor or ceiling assembly. Central mechanical room walls shall be constructed with full height reinforced eight-inch thick masonry units constructed to the underside of the structural deck with construction joints sealed and all cells grouted to provide a complete acoustical separation. (4)

**5.13 Interior Design.** Structural interior design (SID) services include the selection of materials, colors and textures of all interior finish materials and all exterior building finishes and colors.

**5.13.1 Mini-Blinds.** Mini-blinds shall be provided for all exterior office and conference room windows. Blinds shall be of the horizontal metal louver type with white outer surface color. Mini blinds may be attached to the wall or provided between panes of glass integral and standard with the window manufacturer. Integral mini blinds are preferred.

**5.14 Building Systems, Materials, and Equipment.** The proposed building systems and equipment shall be in accordance with the requirements of this section. The Government desires low or no maintenance finish materials to the greatest extent possible. The proposed building systems and material finishes shall be specified to conform to the minimum requirements and allowable options contained within each of the applicable guide specification sections referenced below.

**5.14.1 Concrete.** Requirements for the structural and pavement systems are contained in the structural and geo-technical sections of this RFP.

**5.14.1.1 Building Perimeter Protection.** Provide a 4'-0" wide poured in place concrete sidewalk around the perimeter of each building. Broom finish. Sidewalk elevation should be at least 8-inches below building finish floor and sloped to drain rainwater away from building perimeter.

equipment, ups units, inverters, generators, electrical panels, transformers, etc.) that are installed within spaces being cooled.

Occupancy (Office & Support Areas):	1 person / 100 ft <sup>2</sup> (9.29 m <sup>2</sup> )
Occupancy (Conference Rooms):	1 person / 25 ft <sup>2</sup> (2.32 m <sup>2</sup> )
Occupancy (Target Prep Bays):	1 person / 200 ft <sup>2</sup> (18.48 m <sup>2</sup> )
Occupancy (Guard House):	1 person / 160 ft <sup>2</sup> (14.86 m <sup>2</sup> )
Misc. Equip. Sensible Heat Gain:	3.0 Watts/ft <sup>2</sup> (32.3 Watts/m <sup>2</sup> )
(Applied in all areas)	
Lighting Load (100% to Space):	1.5 Watts/ft <sup>2</sup> (16.1 Watts/m <sup>2</sup> )
Sensible Load Safety Factor:	1.10 (Apply to all room loads)

**7.2.4 Site Criteria.** Temperature conditions at Holloman Air Force Base range from above 104° F in July to below 13° F in January. Summer relative humidity is approximately 18%.

(4)	Project Location:	White Sands Missile Range, NM	(4)
	Latitude:	33° 10' 52" N	
	Longitude:	106° 33' 23" W	
	Elevation:	4350 ft. (1326 m)	
	Prevailing Wind Direction:	Out of S (summer)	
		Out of N (winter)	
	Prevailing Wind Mean Speed:	3.4 mph (1.5 m/s) (winter)	

#### 7.2.5 Outside Design Temperature Requirements.

(4)	Outside Summer:	98° F (37° C) DB	(4)
		64° F (17° C) WB	
	Outside Winter:	23° F (-5° C)	
	Air Cooled Condenser Selection Temp:	105° F (41° C)	

#### Maximum U values Btu/hr ft<sup>2</sup> F (W/m<sup>2</sup> K)

Opaque Walls:	0.08	(0.450)
Gross Walls:	0.13	(0.738)
Roof & Ceiling:	0.026	(0.147)
Perimeter Loss Coefficient:	0.20	(1.136)

#### Degree Days 65° F (18.3° C) Base

Cooling:	1924	(1069)
Heating:	3563	(1979)

#### 7.2.6 Indoor Design Temperatures.

Summer Indoor Design Dry Bulb Temperature:	75° F (23.9° C)
Winter Indoor Design Dry Bulb Temperature:	70° F (21° C)
Winter Night Setback Temperature:	55° F (13° C)
Freeze Protection (Mechanical & Electrical Rooms):	45° F (7.2° C)

7.3.9.1 **Filters.** Filters shall be provided for all air handling units and provided for these facilities. 50.8 mm (2 inch) thick pleated throwaway filters shall be provided for air handling equipment and shall have a filtration efficiency of 60 to 65 percent in accordance with ASHRAE 52. All filters shall be UL Class 2.

7.3.10 **Fire/Smoke Dampers.** Combination Fire/Smoke dampers shall be provided at all fire-rated penetrations requiring a fire damper. Leakage rating shall meet Class 1 requirements. Dampers shall be dynamic rated for the maximum air velocity and pressure differential to which it will be subjected. Dampers shall meet the requirements of UL 555 as a fire damper and UL 555S as a smoke damper. Actuators shall be low voltage electric. Power shall be supplied from the fire alarm control system. Factory furnished sleeves with external mounted actuators shall be furnished. The damper assembly shall be easily and fully accessible for service.

7.3.11 **Diffusers, Grilles and Registers.** Air distribution devices shall be factory-fabricated of steel, corrosion-resistant steel, or aluminum and shall distribute the specified quantity of air evenly over space intended without causing noticeable drafts, air movement faster than 0.25 m/s in occupied zone, or dead spots anywhere in the conditioned area. Inlets and outlets shall be sound rated and certified according to ASHRAE 70. Diffusers and registers shall be as specified in UFGS 15895 - AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEM and shall be color coordinated with the Architectural design.

(4) 7.3.12 **Insulation.** All piping, ductwork, air handlers, pumps, storage tanks and other applicable HVAC equipment shall be insulated. The use of flexible cellular insulation conforming to ASTM C 534 or ASTM D 1056 is prohibited. Internal duct insulation is prohibited. Insulation materials and installation shall be in accordance with UFGS Section 15080A - THERMAL INSULATION FOR MECHANICAL SYSTEMS. (4)

7.3.13 **Access Panels.** Access panels/doors shall be provided as required for valves and appurtenances of the HVAC system in accordance with UFGS Section 15895 - AIR SUPPLY, DISTRIBUTION, VENTILATION, AND EXHAUST SYSTEM. Coordinate with the Architectural discipline to ensure that UFGS Section 05500 - MISCELLANEOUS METAL includes provisions for access panels/doors.

7.3.14 **Vibration and Noise Isolation.** All piping, ductwork, air handlers, pumps, exhaust fans, unit heaters and related equipment shall be properly isolated to prevent vibration and subsequent noise to 95% isolation (Transmissibility = 0.05).

7.3.15 **Seismic Design Requirements.** Protective measures shall be in accordance with UFGS Section 13080 - SEISMIC PROTECTION FOR MISCELLANEOUS EQUIPMENT and UFGS Section 15070A - SEISMIC PROTECTION FOR MECHANICAL EQUIPMENT and TI 5-809-04, Seismic Design for Buildings.



constructed of polyethylene plastic. The supply pump shall be capable of supplying full flow to all fixtures in the guard at 40-psi pressure. The pump shall have a stainless steel casing, corrosion resistant impeller and volute, and a diaphragm-type steel pressure tank.

**7.9.2.6 Domestic Water Piping System Requirements.** The domestic cold and hot water piping systems shall be designed for a maximum system piping loss of 10 psig at full system flow. Maximum fluid flow rates in the hot or cold piping system shall not exceed 1.2 m/s (4 feet per second (fps)). Provide calculations indicating the piping system losses. The piping shall be extended to fixtures, outlets, and equipment. The domestic hot-water and cold-water piping system shall be arranged and installed to permit draining. The supply line to each item of equipment or fixture, except faucets, flush valves, or other control valves that are supplied with integral stops, shall be equipped with a shutoff valve to enable isolation of the item for repair and maintenance without interfering with operation of other equipment or fixtures. Supply piping to fixtures, faucets, hydrants, shower heads, and flushing devices shall be anchored to prevent movement.

**7.9.2.7 Domestic Water Heater.** Domestic water heating is to be a gas-fired, ten-year warranted unit with an operating temperature of 60° C (140° F). The building water supply temperature shall be 49° C (120° F). The size of the hot water heater shall be in accordance with the 1999 ASHRAE Applications Handbook. One hot water heater shall service the entire building and shall be located in the mechanical room. The hot water heating system shall include a hot water recirculation loop and calibrated balancing valves. The water heater storage capacity shall be 379 Liters (100 Gallons) or greater. Water heaters shall be provided with fully automatic controls with safety shut-off and intermittent spark ignition. Water heaters shall meet ASHRAE 90A standards and have a minimum thermal efficiency of 80 percent.

(4) **7.9.2.8 Sanitary Sewer.** All lavatory and sink drains and P-traps shall be coordinated with Architectural millwork. The building Sanitary Sewer shall be designed in accordance with the International Plumbing Code. The administration building shall connect to the existing site septic system. The target preparation buildings shall have new septic systems installed at the buildings. The guardhouse shall connect to the existing sewage system. Coordinate these requirements with the civil sections of this RFP.

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**7.9.2.9 Floor Sinks/Drains.** Provide floor sinks with 3/4" grates in the mechanical rooms and floor drains with full grates within all other areas requiring drains. Coordinate location of floor sinks and floor drains with the structural discipline for floor sloping requirements. All floor sinks and floor drains shall be equipped with trap primers. Floor drains and floor sinks shall be as specified in UFGS Section 15400A - PLUMBING, GENERAL PURPOSE. Floor sinks shall be provided in all spaces, which have raised floor systems. Trap primers shall be provided at all floor sink and floor drain locations.

the respective occupancy (contiguous floor area), whichever is less. A sufficient number of hydraulic calculation runs shall be provided in order to prove the hydraulically most demanding areas.

**7.10.6 Hose Demand.** A 250-gpm exterior hose demand shall be included in the hydraulic calculations. The demand shall be assumed to occur at a fire hydrant located nearest to the building's sprinkler service line point-of-connection to the water distribution system.

(4) **7.10.7 Water Supply.** An existing water storage tank will be utilized to furnish water for fire protection. The existing water storage tank is a lined earthen pond located north of building 5002. The hydraulic calculations shall include all system losses from the facility back to the tank. For calculation purposes, the tank shall be assumed 80% full. A minimum 10% additional safety factor shall also be included in the hydraulic calculations. The supply line shall be sized to provide adequate water supply for the combined sprinkler system and hydrant demand for the Administration Building without the need for an additional booster pump (coordinate with Civil). The fire sprinkler system shall use the existing fire water system, which includes the ground level storage pond and fire pump located in building 5002.

**7.10.8 Deleted.**

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**7.10.9 Underground Equipment Requirements.** All equipment, piping, etc. shall be UL Listed and/or FM Approved for fire protection service; all system components shall be designed for a working pressure of not less than 1200 kPa (175 psi) unless otherwise indicated.

**7.10.9.1** The new underground sprinkler service line shall be PVC pressure pipe intended for use in underground fire service systems. Pipe shall conform to AWWA C900 and shall be rated for a working pressure of at least 1029 kPa (150 psi).

**7.10.9.2** A post indicator valve shall be provided for the facility's new sprinkler service line. The valve shall be located per the requirements of NFPA 24. Indicator post shall be of a length long enough to permit the top of the post to be located 900 mm (3 feet) above finished grade. Pipe bollards shall be provided for protection. Valve shall be supervised with a tamper switch.

**7.10.9.3** The sprinkler service line entering the building shall be ductile iron. Transition shall occur at a point 5 feet beyond the perimeter of the building.

**7.10.9.4** All ferrous materials located underground shall be cathodically protected in accordance with the requirements of UFGS Section 13110A - CATHODIC PROTECTION SYSTEM (SACRIFICIAL ANODE).

**7.10.10 Aboveground Equipment Requirements.** All equipment, piping, etc., shall meet the requirements of UFGS Section 13930A - WET PIPE SPRINKLER SYSTEM, FIRE PROTECTION and as specified herein. All equipment, piping, etc., shall be UL Listed and/or FM Approved for fire protection service; all

maintained, with a minimum/maximum ratio of no more than 2. At the guard house inspection area (where vehicles are stopped and inspected by the guards), a combination of pole mounted and wall mounted lighting shall be provided. This illumination shall be an average of 5.0 footcandles maintained, with a minimum/maximum ratio of no more than 1.5. The inspection area illumination shall be provided so that the vehicle and the vehicle occupant are properly illuminated for inspection by the guards.

**8.2.7 Communications Utilities.** Exterior communications utilities shall consist of exterior telephone cables to each of the four new buildings and exterior LAN cables to the new administration building. All exterior communications installations shall per the White Sands Missile Range (WSMR) communications standards and shall be coordinated with WSMR Communication Group. Point of Contact is Tim Walton, e-mail [Timothy.Walton@46tg.af.mil](mailto:Timothy.Walton@46tg.af.mil).

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**8.2.7.1 New Administration Building - Telephone.** Two (2) new 25 pr., #24 AWG. Cu., exterior grade, WP, Cat 6, per ANSI/EIA/TIA standards, cables in a 4" Sch. 40 PVC conduit, plus a spare 4" Sch. 40 PVC conduit, shall be installed from the backboard in the new administration building to the existing backboard located on east wall of Bldg. 5000 (the existing administration building). The cables shall be terminated on CAT 6 punchdown blocks, which shall be provided on both ends.

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**8.2.7.2 New Administration Building - LAN.** A new 12 strand single mode exterior grade, WP, fiber optic cable, cable in a 4" Sch. 40 PVC conduit with three (3) 1.5" inner ducts, shall be installed from the LAN Rack in the new administration building (see below) to the existing LAN Rack located on the side of Bldg. 5000 (the existing administration building). The cable shall be terminated on Light Termination Units (LTUs) on both ends.

**8.2.7.3 New Target Assembly Buildings - Telephone.** A new 25 pr., #24 AWG. Cu. Cat 6, exterior grade, WP, per ANSI/EIA/TIA standards, cable in a 4" Sch. 40 PVC conduit, shall be installed from the communications backboard in each new target assembly building to the exterior point of connection (POC) as designated by the WSMR Communications Group. The cable shall be terminated on CAT 6 punchdown blocks in the Communication Room of the Target Assembly Building and the exterior terminations at the POC shall be by others. If the POC designated is an OH pole line, a communications line riser assembly per the WSMR standards shall be installed on the pole.

**8.2.7.4 New Guard House - Telephone.** A new 25 pr., #24 AWG. Cu. Cat 6, per ANSI/EIA/TIA standards, cable in a 4" Sch. 40 PVC conduit, plus a spare 4" Sch. 40 PVC conduit, shall be installed from the communications backboard in the new guard house building to the exterior point of connection (POC) as designated by the White Sands Missile Range (WSMR) Communications Group. The cable shall be terminated on CAT 6 punchdown blocks in the on backboard of the Guard House Building and the exterior terminations at the POC shall be by others. If the POC designated is an OH pole line, a communications line riser assembly per the WSMR standards shall be installed on the pole.



(4) 8.2.10 Deleted.

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### 8.3 Interior Electrical.

8.3.1 **General.** The Contractor shall provide complete electrical systems throughout the all of the buildings being installed as part of this project. Power, lighting, communications, and special systems connections and equipment shall be as required below.

8.3.1.1 All installations shall be as required by the National Electrical Code. The Contractor shall provide power to ALL equipment. The Contractor shall be responsible for coordinating between his sub-contractors for control power and shall provide control for all mechanical equipment.

8.3.1.2 **Under Slab.** No conduits, wires, cable, or equipment, except the main service entrance(s), shall be located under the building concrete slab.

8.3.1.3 **Enclosure Covers.** Enclosures shall have screws or screw clamps and shall have provision for locking with utility-type seals.

8.3.1.4 **Fault and Overcurrent Protection.** Overcurrent and fault protection devices shall be coordinated with line-side and load-side fuses or circuit breakers to isolate any electrical fault or overload from the rest of the system. Some breaker sizes may not coordinate under some fault conditions; however, good engineering practices shall be used and devices shall coordinate for all overload conditions. This includes coordination across transformers.

8.3.1.5 **Labeling.** All materials, equipment, fixtures and appurtenances shall be labeled by Underwriters Laboratories, Inc., or a similar acceptable organization.

### 8.3.2 Service Entrances.

8.3.2.1 **Service Equipment.** Service entrance equipment, for the Administration Building and new Target Assembly Buildings, shall consist of a 480 Volt, 3 phase, Main Panel (switchgear, MCC, or switchboard). The service entrance equipment for the new Guard House shall consist of a 240 Volt, 1 phase, main panel. All main panels shall be rated for a minimum of 150% of the calculated demand load. The main panel shall have a single main circuit breaker, which shall serve as the building disconnecting means. The 480 Volt, 3 phase, main panels shall have indicating instruments, which shall show current and voltage for all three phases, line-to-ground and line-to-line. There shall be one meter for voltage and one for current. All service entrances shall be provided with kWH demand meter(s) and instrumentation to monitor all power provided to the building, from the normal power source. (Note: During design, it may be determined that this kWH meter should be installed at the transformer.) All service equipment shall be "fully rated" for available fault current. This service entrance equipment shall provide power for all downstream devices, panels, step-down transformers, etc.

8.3.12.7 **Restrooms.** Lighting shall be controlled by a sonic type motion detector located at the center of the room. Control of exhaust fans shall be as required in mechanical.

8.3.12.8 **Lighting Loads.** Normal lighting loads shall be assumed to be continuous and the lighting load demand factor shall be 100% for all occupied areas. Demand factors for lighting in unoccupied areas may be assigned as appropriate.

8.3.12.9 **Special Lighting System.** In the Target Assembly Buildings special lighting systems are required as follows: Red (low level illumination) light fixtures shall be provided throughout the laboratory and open bay areas, and blue rotating beacon lights shall be provided over personnel doors into the buildings. Both the red and blue light systems shall be provided with local manual controls.

8.3.13 **Fire Alarm System.** The new buildings which are part of this project shall be provided with a complete and fully functional fire alarm system which meets all NFPA code requirements and Holloman AFB's specific requirements. The new fire alarm system shall be a fully addressable, Class A, Type 6, system. The new fire alarm control panel shall be located at the facility's main entrance. The fire alarm system shall communicate with the base's central receiving system (via telephone link) and shall be fully equipped to be compatible with such in accordance with the base's requirements. The fire alarm system shall also provide output to the site security system (the Velocity equipment). The installation shall be coordinated with the Base Electronics Shop. A professionally done, color coded "As-Built" floor plan of the system, which clearly shows the location of all system devices and associated conduit (including all conductors, circuit labeling, and device address), shall be provided. The Contracting Officer's representative shall approve the system drawing proposal and the frame prior to placement.

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8.3.13.1 **Alarm Initiating Circuits.** All alarm initiating devices shall be connected via Class "A" circuits in accordance with NFPA 72. As a minimum requirement, separate initiating device zones shall be provided for each type of initiating device (e.g. area smoke detectors vs. duct-mounted smoke detectors). As an additional requirement, separate initiating device zones shall be provided for devices located remote from one another (e.g. manual pull stations located within different sectors of the building, or detectors located in different rooms).

8.3.13.1.1 **Smoke Detection.** Smoke detection shall be provided for rooms having raised access flooring (where provided) or rooms utilized as electronic/data processing spaces. Detection shall be provided in accordance with the requirements of NFPA 75. Separate zoning shall be provided for detectors at each level. Duct-mounted smoke detection shall be provided for air handling units in accordance with the requirements of NFPA 90A. The fire alarm control panel shall supply power to the detectors. A smoke detector shall be provided at the fire alarm control panel location in accordance with NFPA 72. This detector shall be zoned separate from the abovementioned detectors. Smoke detection shall be provided in other areas of the facility where required by criteria.

8.3.13.1.3 **Manual Pull Stations.** Manual pull stations shall be provided at each exit and where elsewhere required by NFPA 101. The pull stations shall be located in accordance with NFPA 72 requirements and ADA Accessibility Guidelines.

8.3.13.1.4 **Flow Indicator Switches.** Each sprinkler system flow switch shall be connected to the fire alarm control panel via a separate zone.

8.3.13.2 **Indicating Devices.** Combination alarm horn/strobe units and strobe devices shall be located throughout the facility, in accordance with NFPA 72 and ADA Accessibility Guidelines. In addition, a weather-proof electric alarm bell shall be located on the wall outside of the sprinkler riser room.

8.3.13.3 **Supervisory Devices.** The fire alarm control panel shall supervise all sprinkler system control valve tamper switches. A separate zone shall be provided for all tamper switches which are not located within the same room.

8.3.13.4 **Output Controlled Devices.** Any alarm condition shall cause automatic shutdown of all supply air handling units which supply over 2000 cfm. In addition, any alarm condition shall also cause automatic closure of all combination fire/smoke dampers within the facility. All such dampers shall be powered from the fire alarm control panel (coordinate with the mechanical system provider).

8.3.14 **Telephone System.** Each facility shall be pre-wired with a complete telephone system. Flush outlets shall be provided for all rooms and workstations as required herein. Wiring shall be homerun style back to the main communication room. All telephone homeruns shall be concealed. Conductors, wiring method and method of termination shall be CAT-6, per TIA/EIA 568A or the latest approved version of the ANSI/TIA/EIA standards. The telephone service entrance and backboard shall be located in a separated Telephone Room and shall have type 66 punch down blocks installed. The Contractor shall provide grounding equipment, service entrance equipment, all conductors and outlets throughout the building. The Contractor shall connect and terminate all wiring to the outlets at each location and to the punch down blocks on the backboards. A minimum of six (6) dedicated telephone links shall be provided to the HAFB Fire Alarm Central Receiving System.

(4) 8.3.14.1 **Requirements.** Outlets/receptacles within the building shall be provided as follows: In hard walled offices, two duplex outlets per office.

In cubicle offices, two duplex outlets per office. In general gathering areas (eg: break rooms, etc.) one duplex outlet per wall. In conference rooms, one duplex outlet per 25 linear feet of wall. In laboratory and maintenance areas, one duplex outlet per workbench space or 20 linear feet of wall, whichever is greater. In mechanical and electrical rooms, two duplex outlets per room. (4)

8.3.14.2 **Outlet Terminations.** Telephone outlets shall be modular, four-position RJ-45 type receptacles, rated for CAT-6 installation, per EIA 568A or the latest approved version of the ANSI/TIA/EIA standards. Each outlet location shall be a duplex (two RJ-45) receptacle. In locations where LAN outlets are required, the telephone outlets (duplex RJ-45 outlets) shall be

installed together with the required LAN outlets in a Quadruplex outlet. Telephone outlets shall be "keyed" differently from the LAN outlets so that they cannot be interchanged.

**8.3.14.3 Wiring.** Telephone system wiring shall be 4 twisted pair, #24 copper, rated for CAT-6 or the latest approved version of the ANSI/TIA/EIA standards. Interior wiring shall be installed in EMT, IMC, or RGS conduit, or a combination of conduit and cable tray. In all cases, a raceway, which will allow future cables to be installed or removed shall be installed throughout the full length of the communication cabling pathway. Cables for the telephone wiring system shall have an outside jacket which is white.

**8.3.14.4 Telephone System Service Entrance.** The telephone system service entrance shall consist of the Backboard and punch down blocks in the telephone room and a minimum of two (2) 4 inch conduits (with pull ropes) installed and the exterior telephone cables required above. The exterior copper cable described above shall be terminated on 66 type punchdown blocks.

**8.3.15 Data (LAN) Communications System.** A Data communications (LAN) systems shall be provided throughout the Administration Building. The Data/LAN systems installed shall be considered a secured/classified system. Outlets/receptacles within the building shall be provided as follows: In hard walled offices, two duplex outlets per office. In cubicle offices, two duplex outlets per office. In conference rooms, one duplex outlet per 25 linear feet of wall. The network shall each be installed as a complete system, including raceway systems, wire and cable, connections and termination devices and equipment racks (servers and computer shall not be provided). All cables installed shall be terminated. For each device or location listed here or below the Contractor shall install a duplex data/LAN port. The systems shall be provided with a performance warranty covering the entire system. Unless otherwise specified, the copper systems installation shall be a Category 6 system per EIA 568A or the latest approved version of the ANSI/TIA/EIA standards.

**8.3.15.1 Classified LAN/Data Systems.** Classified LAN/Data systems shall consist of a LAN System Rack(s), patch panels, and LAN/Data system wiring in dedicated conduits and dedicated LAN/Data receptacles (as required above). All Classified LAN/Data system installations shall meet the installation requirements for "Red" per the DOD Mil Handbook 232A, and for "SCIF" per DCID 1/21. Cables for the Classified LAN/Data systems shall be provided with an outside jacket which is orange.

**8.3.15.2 Terminations.** Copper LAN System outlets shall be modular, eight-position RJ-45 type receptacles, rated for CAT-6 installation, per EIA 568A or the latest approved version of the ANSI/TIA/EIA standards. Each outlet location shall be a duplex installation, with two (2) RJ-45 receptacles. In classified locations the LAN/Data outlets (duplex RJ-45 outlets) shall be installed in dedicated boxes and conduit. Copper LAN outlets shall be "keyed" differently from the telephone outlets so that they cannot be interchanged. Terminations for classified LANs must be a minimum of 6 ft. from any non-secured LAN or telephone termination.



Building), glass break detectors on all windows (where windows are provided), and PIR motion detection in all entry way hallways and in all interior offices, laboratory areas, open bay areas, and Mechanical/Electrical rooms.

(4) 8.3.18.3 **SCIF Rooms/Areas.** Both Target Assembly Buildings and the Administration Building shall be roughed-in (conduit, J-Boxes, etc.) for future SCIF areas throughout the buildings (note: this shall be done for electrical materials and equipment only). Rough-ins for future SCIF Rooms and Areas shall be provided per the requirements of DCID 1/21.

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8.3.18.4 **CCTV.** CCTV cameras shall be provided in both Target Assembly Buildings and in the Administration Building in the hallways at all entrance points. The video output of the CCTV cameras shall be compatible with and conveyed, via the exterior fiber optic cables, to the Central Security System in the Guard House.

8.3.18.5 **Compatibility.** The Security Systems within each building shall be provided as a complete and operational sub-security system. This shall include all Access Control and Intrusion Detection equipment, CCTV Equipment, conduit and wiring, and security control panel (with UPS and 48 hour power backup). All security equipment and controls shall be compatible with and shall report to the existing central security monitoring equipment in the Guard House.

8.3.18.6 **Existing Central Security System.** The existing Central Security System (CSS), which monitors security site wide, is a "Velocity" system by Hirsh Corp. It is a Hirsh Electronics Model 2, with Net Mux4 transmitters and with SMFO converters for transmit and receive. As part of this contract, this CSS system shall be moved from the existing Guard House to the new Guard House and shall be upgraded as required to accept inputs (via the exterior FO cables required above) from the new Administration Building and the two new Target Assembly Buildings.

8.3.18.6.1 **Antenna.** The new Guard House shall be provided with an antenna (including conduit and cable connections) for the CSS system alarm output.

8.3.19 **Motors.** All motors installed, whether supplied separately or as part of an equipment package, shall be appropriately rated for the duty cycle and service conditions of the location and the application.

8.3.20 **Miscellaneous.**

8.3.20.1 **Hazardous Areas.** Hazardous Areas per NEC Art. 500, 501, 502, and 503 shall be provided in the Target Assembly buildings, as applicable for Chemical use and storage areas.

8.3.20.2 **Loads.** Power supplies for all loads shall be provided.

(4) 8.3.20.2.1 **User Loads.** Four (4) 240 Volt (208 Volt) plugs and power supplies shall be provided per Target Assembly Building. Plugs shall be 100 Amp., 3 phase, 3W/4P, 480 Volt, Crouse-Hinds # NPQ1048 (or equal). For design load purposes, the demand of the plugs shall be assumed to be 80% of the rated plug capacity (i.e., 100 Amp plug shall have an 80 Amp design load).

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8.3.20.2.2 **Building Loads.** Power supplies for all building loads shall be provided. This shall include the new air compressors required in the Target Buildings.

(4) 8.3.20.3 **Gate Operators.** At the Guard House, power and controls shall be provided for Entrance and Exit Gates (Note: Relocate the power controls for the existing gates to the new guard house.). Gates shall be operable from the Guard Station within the Guard House. (4)

8.3.20.4 **Exterior Equipment.** All exterior mounted equipment shall be provided with exterior grade, weather proof enclosures.

<http://www.spa.usace.army.mil/ec/cadd/index.htm>

(4)

Lettering shall be in all capitals with a minimum height of 1/8" on a full-size drawing and fonts shall be AutoCAD "Roman Simplex" with a width factor of zero point eight (0.8). In addition to these requirements, all drawings shall be prepared per the CAD standards given in the A/E/C/ CADD Standards Release 2.0, available on the internet at:

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<http://tsc.wes.army.mil>

Drawings shall be in soft metric in accordance with the Appendix, Metric Design Guide.

**2.4 Design Analysis:** The Design Analysis shall be developed in accordance to the criteria specified within this RFP, Section 01010 and the Appendix, Design Analysis Guidance. An electronic template of the Design Analysis is available to the Contractor. The Design Analysis shall include all features with the necessary calculations, tables, methods and sources used in determining equipment and material sizes and capacities, and shall provide sufficient information to support the design.

**2.5 Specifications:** Specifications shall be developed utilizing Unified Facilities Guide Specifications, "Master Spec", or "Spectext" in conjunction with Section 01010 and the Appendix, Specification Guidance. If other than Corps guides are utilized, the Contractor shall insure that the specifications follow the Master Format. All specifications shall be in sufficient detail to fully describe and demonstrate the quality of materials, the installation and performance of equipment, and the quality of workmanship. If other than Unified Facilities guides are utilized, the Contractor shall edit the specifications used so that all of the submittal, quality control and testing requirements given in all of the guides are included. In addition, the quality control procedures used shall include the testing and quality control requirements given in the Quality Assurance/Quality Control found in section 01451. If specific brand names or products are identified in the specifications, the Contractor shall provide an "or equal" statement and shall provide the salient characteristics that may be used in determining what is "equal". The Contractor shall not alter specifications Section 00800 or any Division 1 specifications during the design process. These shall be submitted verbatim with the Final, Corrected Final, and Construction Set specifications. The Contractor shall obtain Unified Facilities Guide Specifications from the Albuquerque District office.

**2.6 Color Boards.** Color/finish boards shall be in accordance with the Appendix, Color Board Guidance of this RFP.

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**2.7 Electronic Data Deliverables.** Drawings shall be delivered in AutoCAD<sup>™</sup> 2000. Specifications shall be delivered in Microsoft MS Word 2000. Electronic data deliverables shall be on compact disk.

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**2.8 Certification of Computer Media:** Certification of Computer Media shall be in accordance with the Appendix. All delivery media (CDs, etc.) for

SECTION 01020

BRAND NAME OR EQUAL

1. GENERAL

1.1 The use of proprietary references to brand name manufacturers, products, and processes is intended to be descriptive not restrictive. The brand name indicates the level of quality required by the plans and specifications. Equal substitutions may be submitted for all listed brand names on the basis of the established salient characteristics and level of quality for that particular manufacturer, product, or process. See Section 00800 - SPECIAL CONTRACT REQUIREMENTS, "BRAND NAME OR EQUAL (FAR 52.211-6) (Aug 1999)."

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SECTION 01510

UTILITIES

- (4) 1. AVAILABILITY AND USE OF UTILITY SERVICES (APR 1984). All utilities with the exception of liquefied petroleum gas (LPG), required to complete tests of equipment or systems installed under this contract will be furnished to the Contractor without charge if connections to utility lines are installed under the contract. The Contractor shall purchase and provide liquefied petroleum gas (LPG) for testing of the installed tanks, piping system, and equipment. (4)
2. WATER FOR CONSTRUCTION PURPOSES. The Government will furnish to the Contractor all water for construction purposes at no charge to the Contractor. The Contractor shall install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. All water shall be carefully conserved. Before final acceptance, temporary connections and piping installed by the Contractor shall be removed in a manner satisfactory to the Contracting Officer.
3. ELECTRIC POWER. The Government will furnish electricity to the Contractor at no charge. The Contractor shall furnish, at his own expense, all backup power supply, temporary electric power lines and equipment required under this contract. All temporary electrical installations shall be subject to the approval of the Contracting Officer. All temporary lines shall be furnished, installed, connected, and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer and shall be removed by the Contractor in like manner at his expense prior to final acceptance of the construction. If additional electrical power is required for construction the Contractor shall provide the power using his own generators. The Contractor shall provide adequate protection for his equipment so that Contractor electrical equipment faults will not adversely affect the site electrical system or the utility system.
4. WASTE MATERIAL. Unless otherwise specified, waste material shall be disposed of by the Contractor at a licensed off site sanitary landfill or sewage disposal plant. Permission to use the off-site sanitary landfill or sewage disposal plant shall be obtained by the Contractor and any costs attendant thereto shall be borne by the Contractor.
5. TEMPORARY TELEPHONE SERVICE. The Contractor is required to determine line availability and to make arrangements for installation of telephone lines and instruments with the telephone company. All costs associated with telephone installation and service shall be the responsibility of the Contractor.
6. SEWAGE DISPOSAL FOR TEMPORARY FACILITIES. A sewage disposal location is not available at the site for use under this contract.
7. INTERRUPTION OF EXISTING UTILITIES SERVICES. The Contractor shall perform the work under this contract with a minimum of outage time for all utilities. In some cases, the Contractor may be required to perform the work while the existing utility is in service. The existing utilities services may be interrupted only when approved by the Contracting Officer. When it is necessary to interrupt the existing utilities, the Contractor shall notify the Contracting Officer in

APPENDIX O

INDEX OF DRAWINGS

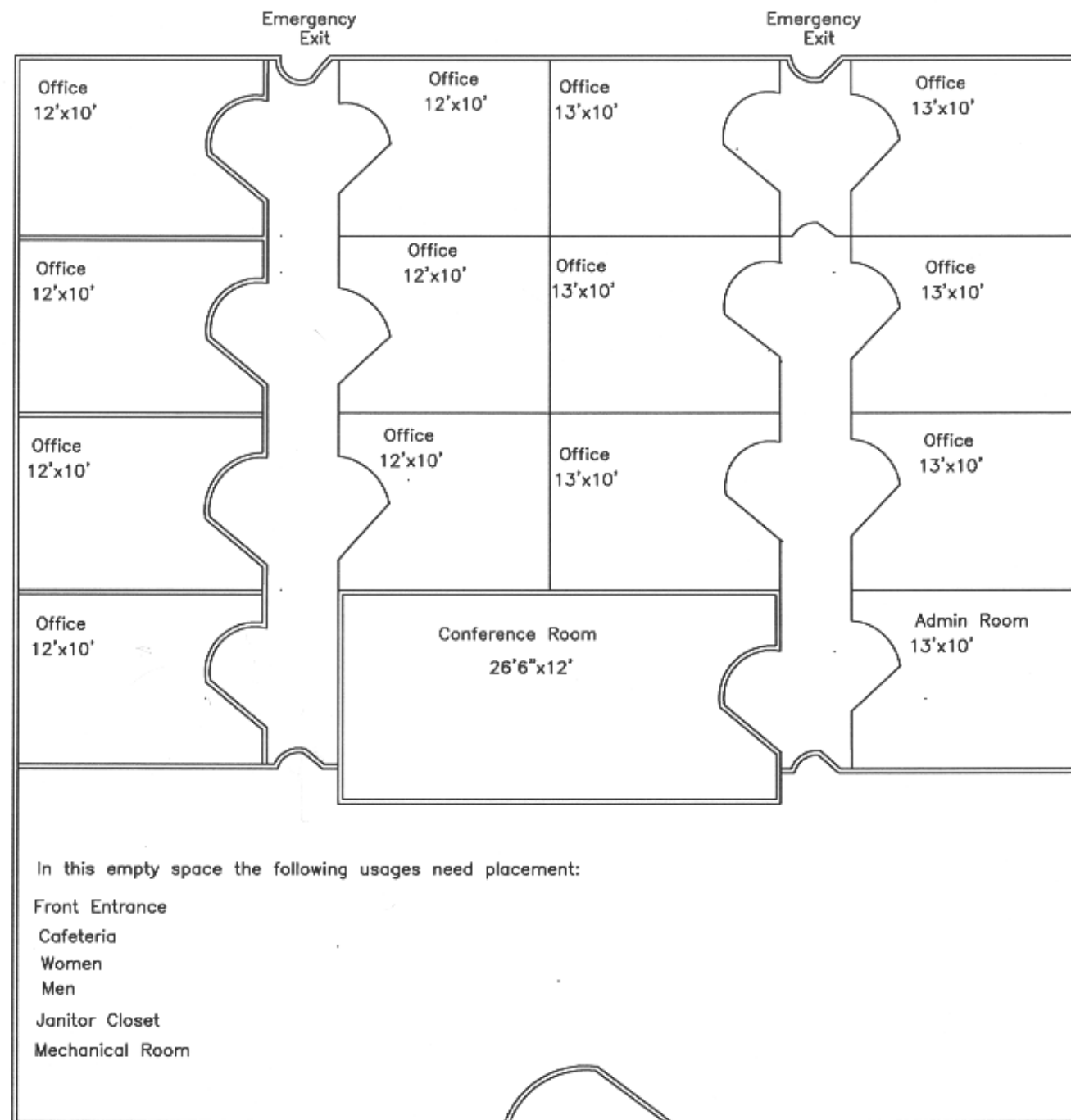
(4)

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	COVER
C-2	SITE MODIFICATION PLANS
A-1	FLOOR PLAN, DETAILS, SCHEDULES
A-2	ELEVATIONS
M-1	HVAC FLOOR PLAN
M-2	ENLARGED HVAC FLOOR PLANS
E-1	POWER PLAN, SCHEDULES & NOTES
E-2	LIGHTING PLAN & SCHEDULE, LEGEND
E-3	SPECIAL SYSTEMS PLAN & NOTES, POWER RISER
	ADMIN. BUILDING

(4)

(4)



ADMIN. BUILDING  
NOT TO SCALE

Note:  
== True wall (floor to roof)